



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,528	10/24/2003	Todd Brown	ZAHFRI P516US	2300

20210 7590 03/21/2005
DAVIS & BUJOLD, P.L.L.C.
FOURTH FLOOR
500 N. COMMERCIAL STREET
MANCHESTER, NH 03101-1151

EXAMINER

LERNER, AVRAHAM H

ART UNIT	PAPER NUMBER
----------	--------------

3611

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

10/693,528

Applicant(s)

BROWN, TODD

Examiner

Avraham Lerner

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0104</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement, filed January 30, 2004, is acknowledged and has been considered.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi (U.S. Patent No. 4,618,022).

Hayashi discloses a drive train comprising all elements as claimed, including a prime mover powering a transmission providing drive power to a front drive train and rear drive train, the front drive train having a front transaxle driveably connected to the transmission, the front transaxle having a first differential device located between at least a first and a second front wheels, the rear drive train having a rear axle driveably connected to the transmission, the rear axle having a second differential device positioned between at least a first and a second rear wheels, and a rear drive shaft extending between the transmission and the rear axle to provide power from the prime mover to the first and second rear wheels; and a continuously variable coupling situated in the drive train to provide contiguous power transmission between the front drive train and the rear drive train at a desired ratio permitting a difference between a front wheel rotation speed and a rear wheel rotation speed.

5. Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Hasegawa (U.S. Patent Application Publication No. 2003/0079928 A1).

Art Unit: 3611

Hasegawa discloses a drive train comprising all elements as claimed, including a prime mover powering a transmission providing drive power to a front drive train and rear drive train, the front drive train having a front transaxle driveably connected to the transmission, the front transaxle having a first differential device located between at least a first and a second front wheels, the rear drive train having a rear axle driveably connected to the transmission, the rear axle having a second differential device positioned between at least a first and a second rear wheels, and a rear drive shaft extending between the transmission and the rear axle to provide power from the prime mover to the first and second rear wheels; and a continuously variable coupling situated in the drive train to provide contiguous power transmission between the front drive train and the rear drive train at a desired ratio permitting a difference between a front wheel rotation speed and a rear wheel rotation speed, the coupling positioned in the rear drive train to permit the difference between the front wheel rotation speed and the rear wheel rotation speed, and a side shaft separate from the front drive train extending from the transmission to provide a power take off for the rear drive shaft independent of any torque change through the front drive train.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3611

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa in view of McCarrick et al. (U.S. Patent No. 5,916,053).

Hasegawa discloses a device comprising all elements as claimed, as recited in detail, except for the continuously variable coupling comprising a variator having a first cone pulley pair and a second cone pulley pair connected by a belt providing a variator ratio between the first and second cone pulley pair in a range of about .9-1.8.

McCarrick et al. discloses that it is known in the art to provide a CVT with a variator (16) as claimed, and specifically having a ratio in a range of about .9-1.8 (see column 4, last paragraph).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the transmission and coupling of Hasegawa with the first and second cone pulleys at the ratio of McCarrick et al. in order to provide a known reliable transmission mechanism whereby power is transmitted and reduced so as to improve control of the vehicle and improve efficiency as a whole.

Allowable Subject Matter

8. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCarrick et al. (U.S. Patent No. 5,941,789), Miyawaki (U.S. Patent No. 5,046,576),

Art Unit: 3611

Kouno (U.S. Patent No. 4,987,967), Austin (U.S. Patent Application Publication No. 2004/0251069), Fredriksen et al. (U.S. Patent No. 5,679,085), and Nishikawa et al. (U.S. Patent No. 4,945,482) disclose four-wheel drive vehicles having continuously variable transmissions and front and rear differentials.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Avraham Lerner whose telephone number is (703) 308-0423. The examiner can normally be reached on M-F (8:15-5:45) first Wednesday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on (703) 308-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AVRAHAM LERNER
PRIMARY EXAMINER

A. Lerner 3/15/05

March 15, 2005